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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,370

04/11/2006

Soo-Chang Moon

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PARK LAW FIRM
3255 WILSHIRE BLVD
SUITE 1110
LOS ANGELES, CA 90010

EXAMINER

HIJAZ, OMAR F

ART UNIT

PAPER NUMBER

4165

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,370	Applicant(s) MOON, SOO-CHANG	
	Examiner OMAR HIJAZ	Art Unit 4165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/11/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is a first Office Action Non-Final rejection on the merits.

Claims 1-12, are currently pending and have been considered below.

Drawings

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: The recitation "Cencrete" in the title is misspelled.

3. The disclosure is objected to because of the following informalities: The recitation "With Perforated Metal Stud" in the title lacks antecedent basis and is not disclosed anywhere in the specification.

Appropriate correction is required.

Claim Objections

4. Claims 1 and 5 are objected to because of the following informalities: The recitation "side ends" lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leblang (U.S. Patent No. 6,401,417) in view of Olsen et al (EP 0878590 A2).

As per claim 1, Leblang teaches a form panel system (concrete form structure; abstract) comprising: compression cement boards disposed opposite to each other while being spaced a predetermined distance from each other (plural pair of spaced elongate facing rigid insulation boards; abstract); and at least one metal plate stud disposed between the compression cement boards (16A), the metal plate stud being composed of a metal plate having a predetermined thickness, the metal plate having at least one opening formed therein (structural steel channels are provided with holes; col. 8, lines 26-27), the metal plate stud being provided at both opposite side ends thereof with bent parts (figure 3D), wherein the metal plate stud is fixed to the respective compression cement boards by means of fixing pieces (140), and concrete is injected and cured into the space between the compression cement boards, to which the metal plate stud is fixed (pour concrete into the chamber defined by the forming structure; col. 27, lines 34-35; permit the concrete to cure; col. 27, line 40).

Leblang fails to disclose the compression cement boards being reinforced with fiber materials.

Olsen et al discloses a building kit with wall plates constructed of expanded polystyrene (EPS) which is construed to be a fiber-reinforced material (col. 2, lines 57-58).

Therefore from the teaching of Olsen et al, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the boards of Leblang with fiber-reinforced material as taught by Olsen et al since such a composition is resistant to fire (col. 1, lines 25-26).

As per claim 2, Leblang fails to disclose at least one cement board reinforcing member linearly attached to the respective compression cement boards.

Olsen et al discloses a building kit with parallel wall plates (abstract) comprising linear numerous surface grooves (fig. 1).

Therefore from the teaching of Olsen et al, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the concrete boards of Leblang to include the groove members as taught by Olsen et al in order to facilitate transport to the building site (col. 2, lines 14-15).

As per claim 3, Leblang teaches the metal plate stud is disposed vertically or horizontally, and a horizontal or vertical reinforcing member is inserted through the opening formed at the metal plate stud (figure 15).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leblang (U.S. Patent No. 6,401,417) in view of Olsen et al (EP 0878590 A2) and in further view of Cook (U.S. Patent No. 4,434,900).

The Leblang and Oslen et al combination fails to disclose the opening has a width gradually decreased in one direction such that the horizontal reinforcing member is fitted in the opening due to the weight of the horizontal reinforcing member in a wedge coupling fashion.

Cook discloses a panel and post combination (abstract) with keyholes in the channel of the posts that have a narrow slot portion for receiving fastener heads attached to the panels to form an interlocking relation (col. 1, lines 51-55).

Therefore from the teaching of Cook, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the steel channels with the holes of Leblang in the Leblang and Oslen et al combination with the narrowing slots of Cook to facilitate assembly and disassembly (col. 1, lines 14-15).

8. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leblang (U.S. Patent No. 6,401,417) in view of Olsen et al (EP 0878590 A2) and in further view of Lanahan et al (U.S. Patent No. 6,167,624).

As per claim 5, Leblang teaches a form panel system (concrete form structure; abstract) comprising: compression cement boards disposed opposite to each other while being spaced a predetermined distance from each other (plural pair of spaced elongate facing rigid insulation boards; abstract); metal plate studs disposed between the compression cement boards (figure 15), each of the metal plate studs being composed of a metal plate having a predetermined thickness, each of the metal plate studs having at least one opening formed therein (structural steel channels are provided with holes; col. 8, lines 26-27), each of the metal plate studs being provided at both

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opposite side ends thereof with bent parts (figure 3D), wherein the metal plate studs are fixed to the compression cement boards by means of fixing pieces (140), and concrete is injected and cured into the space between the compression cement boards, to which the metal plate studs are fixed (pour concrete into the chamber defined by the forming structure; col. 27, lines 34-35; permit the concrete to cure; col. 27, line 40).

Leblang fails to disclose the compression cement boards being reinforced with fiber materials.

Olsen et al discloses a building kit with wall plates constructed of expanded polystyrene (EPS) which is construed to be a fiber-reinforced material (col. 2, lines 57-58).

Therefore from the teaching of Olsen et al, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the boards of Leblang with fiber-reinforced material as taught by Olsen et al since such a composition is resistant to fire (col. 1, lines 25-26).

The Leblang and Olsen et al combination further fails to disclose foamed plastic panels disposed at the inside surface of at least one of the opposite compression cement boards, each of the foamed plastic panels being formed by means of electric heating wires.

Lanahan et al discloses a method for producing a polymeric foamed material panel formed by hot wire cutting (abstract) which can be used in to form the structure, the insulation, and the substrate for the interior finishes (col. 43, lines 50-52, 58).

Therefore from the teaching of Lanahan et al, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the concrete form structure of Leblang and Olsen et al to include the foam plastic panels as taught by Lanahan et al in order to reduce costs by eliminating secondary processing steps (col. 43, lines 55-56).

As per claim 6, Leblang fails to disclose at least one cement board reinforcing member linearly attached to the respective compression cement boards.

Olsen et al discloses a building kit with parallel wall plates (abstract) comprising linear numerous surface grooves (fig. 1).

Therefore from the teaching of Olsen et al, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the concrete boards of Leblang to include the groove members as taught by Olsen et al in order to facilitate transport to the building site (col. 2, lines 14-15).

As per claim 7, the Leblang, Olsen et al, and Lanahan et al combination teaches all of the structural elements as mentioned in claim 5. Leblang further teaches each of the panels is provided at one side thereof with supporting grooves or slits in which the metal plate studs are fixedly fitted (figure 3D).

As per claim 8, Leblang teaches the metal plate studs are disposed vertically or horizontally, and a horizontal or vertical reinforcing member is inserted through at least one of the openings formed at the metal plate studs (figure 15).

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leblang (U.S. Patent No. 6,401,417), in view of Olsen et al (EP 0878590 A2), in view of Lanahan

et al (U.S. Patent No. 6,167,624), and in further view of Cook (U.S. Patent No. 4,434,900).

As per claim 9, The Leblang, Oslen et al, and Lanahan et al combination fails to disclose at least one opening has a width gradually decreased in one direction such that the horizontal reinforcing member is fitted in the opening due to the weight of the horizontal reinforcing member in a wedge coupling fashion.

Cook discloses a panel and post combination (abstract) with keyholes in the channel of the posts that have a narrow slot portion for receiving fastener heads attached to the panels to form an interlocking relation (col. 1, lines 51-55).

Therefore from the teaching of Cook, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the steel channels with the holes of Leblang in the Leblang, Oslen et al, and Lanahan et al combination with the narrowing slots of Cook to facilitate assembly and disassembly (col. 1, lines 14-15).

10. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leblang (U.S. Patent No. 6,401,417), in view of Olsen et al (EP 0878590 A2), in view of Lanahan et al (U.S. Patent No. 6,167,624), and in further view of Strausbaugh (U.S. Patent No. 1,367,438).

As per claim 10, the Leblang, Olsen et al, and Lanahan et al combination teaches the structural elements as mentioned in claim 5. Leblang further teaches the compression boards to which the panels are attached, are connected to each other on the same plane and the panels are provided at both ends thereof with supporting

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grooves or slits (figure 3D); and concrete moves in the space between the opposite members such that the concrete is mixed and cured (pour concrete into the chamber defined by the forming structure; col. 27, lines 34-35; permit the concrete to cure; col. 27, line 40).

Additionally, Lanahan et al discloses a method for producing a polymeric foamed material panel formed by hot wire cutting (abstract) which can be used in to form the structure, the insulation, and the substrate for the interior finishes (col. 43, lines 50-52, 58).

The Leblang, Olsen et al, and Lanahan et al combination fails to disclose one-plane connecting members are engaged; and the one-plane connecting members are provided at one side thereof with latching protrusions, which are engaged in the structural assembly while concrete is prevented from leaking from the space between the foamed plastic panels connected to each other on the same plane.

Strausbaugh discloses wall molds used to form concrete walls (col. 1, lines 10-12) such that the wall mold blocks are connected together on the same plane by tie blocks (col. 3, lines 11-13), which are engaged at the slits between the blocks (figure 1). In addition, it is construed that the concrete will be prevented from leaking since the mold plates and the blocks shall be flush against each other (page 2, lines 22-24).

Therefore from the teaching of Strausbaugh, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the concrete form structure of the Leblang, Olsen et al, and Lanahan et al combination to include the tie

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block interlocking members as taught by Strausbaugh in order to rapidly build the mold (col. 1, lines 22-23).

As per claim 11, the Leblang, Olsen et al, and Lanahan et al teaches the structural elements as mentioned in claim 5. Leblang further teaches the panels are connected to each other on one plane and the panels are provided at both ends thereof with slits (figure 3D); and concrete moves in the space between the opposite members such that the concrete is mixed and cured (pour concrete into the chamber defined by the forming structure; col. 27, lines 34-35; permit the concrete to cure; col. 27, line 40).

Additionally, Lanahan et al discloses a method for producing a polymeric foamed material panel formed by hot wire cutting (abstract) which can be used in to form the structure, the insulation, and the substrate for the interior finishes (col. 43, lines 50-52, 58).

The Leblang, Olsen et al, and Lanahan et al fails to disclose the panels are engaged to each other on the opposite plane by means of two-plane connecting members; and the one-plane connecting members are provided at both sides thereof with latching protrusions, which are engaged on one plane and on the opposite plane so as to connect the panels to each other while concrete is prevented from leaking from the space between the foamed plastic panels connected to each other on one plane and on the opposite plane.

Strausbaugh discloses wall molds used to form concrete walls (page 1, lines 10-12) such that the wall mold blocks are tied together on opposite planes by connecting members (page 2, lines 64-65), which are engaged at the slits between the blocks

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(figure 1). In addition, it is construed that the concrete will be prevented from leaking since the mold plates and the blocks shall be flush against each other (page 2, lines 22-24).

Therefore from the teaching of Strausbaugh, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the concrete form structure of the Leblang, Olsen, and Lanahan et al combination to include the tie block connecting members as taught by Strausbaugh in order to rapidly build the mold (col. 1, lines 22-23).

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leblang (U.S. Patent No. 6,401,417) in view of Lanahan et al (U.S. Patent No. 6,167,624).

Leblang teaches a form panel system (concrete form structure; abstract) comprising: compression cement boards disposed opposite to each other while being spaced a predetermined distance from each other (plural pair of spaced elongate facing rigid insulation boards; abstract); metal plate studs disposed between the compression cement boards (figure 15), each of the metal plate studs being composed of a metal plate having a predetermined thickness, (structural steel channels; col. 8, lines 26-27), each of the metal plate studs being provided at both opposite side ends thereof with bent parts, (figure 3D), and concrete is injected and cured into the space between the compression cement boards, to which the metal plate studs are fixed (pour concrete into the chamber defined by the forming structure; col. 27, lines 34-35; permit the concrete to cure; col. 27, line 40).

Leblang fails to disclose foamed plastic panels disposed at the inside surface of at least one of the opposite compression cement boards, each of the foamed plastic panels being formed by means of electric heating wires.

Lanahan et al discloses a method for producing a polymeric foamed material panel formed by hot wire cutting (abstract) which can be used in tandem with structural panels by becoming the structure, the insulation, and the substrate for the interior finishes (col. 43, lines 50-52, 58).

Therefore from the teaching of Lanahan et al, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the concrete form structure of Leblang to include the foam plastic panels as taught by Lanahan et al in order to reduce costs by eliminating secondary processing steps (col. 43, lines 55-56).

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMAR HIJAZ whose telephone number is (571)270-5790. The examiner can normally be reached on Mon-Fri 9:30 a.m. - 7:00 p.m. (alternating Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynda Jasmin can be reached on (571)272-6782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OFH

/Lynda Jasmin/

Supervisory Patent Examiner, Art Unit 4165